

1-15. Previously cancelled.

16. (Presently amended) A method of diagnosing a risk of developing insulin resistance comprising determining the level of a human or mouse Mal1 transcripts or polypeptide in a tissue sample, wherein an increase of at least 5% in the level of said transcripts ~~or said polypeptide~~ in said tissue compared to a normal control tissue indicates that said human ~~or mouse~~ is at risk of developing insulin resistance, wherein said human Mal 1 transcript comprises at least 10 nucleotides of SEQ ID NO:4 or the complement thereof.

17-20. Previously cancelled

21. (CANCELED) The method of claim 16, wherein said increase is 5% more than a normal control value.

22. (Previously amended) The method of claim 16, wherein said increase is 10% more than a normal control value.

23. (Previously amended) The method of claim 16, wherein said increase is 20% more than a normal control value.

24. (Previously amended) The method of claim 16, wherein said increase is 50% more than a normal control value.

25. (CANCELED) The method of claim 16, wherein said method comprises determining the level of a human Mal1 transcript.

26. (CANCELED) The method of claim 16, wherein said method comprises determining the level of a human Mal1 polypeptide.

27. (Previously amended) The method of claim 25, wherein said human Mal1 transcript

comprises nucleotides 49-456 of SEQ ID NO: 4.

28. (CANCELED) The method of claim 26, wherein said human Mal1 polypeptide comprises SEQ ID NO: 3.

29. (CANCELED) The method of claim 16, wherein said method comprises determining the level of a mouse Mal1 transcript.

30. (CANCELED) The method of claim 16, wherein said method comprises determining the level of a mouse Mal1 polypeptide.

31. (Newly added) A method of diagnosing a risk of developing insulin resistance comprising determining the level of a human Mal1 polypeptide in a tissue sample, wherein an increase of at least 5% in the level of said polypeptide in said tissue compared to a normal control tissue indicates that said human is at risk of developing insulin resistance, wherein said human Mal1 polypeptide comprises the amino acid sequence of SEQ ID NO:3.

32. (Newly added) The method of claim 31, wherein said increase is 10% more than a normal control value.

33. (Newly added) The method of claim 31, wherein said increase is 20% more than a normal control value.

34. (Newly added) The method of claim 31, wherein said increase is 50% more than a normal control value.

35. (Newly added) A method of diagnosing a risk of developing insulin resistance comprising determining the level of a mouse Mal1 transcript in a tissue sample, wherein an increase of at least 5% in the level of said transcript in said tissue compared to a normal control tissue indicates that said mouse is at risk of developing insulin resistance, wherein said mouse Mal1 transcript comprises at least 10 nucleotides of SEQ ID NO:2 or the complement thereof

36. (Newly added) A method of diagnosing a risk of developing insulin resistance comprising determining the level of a mouse Mal1 polypeptide in a tissue sample, wherein an increase of at least 5% in the level of said polypeptide in said tissue compared to a normal control tissue indicates that said mouse is at risk of developing insulin resistance, wherein said mouse Mal1 polypeptide comprises the amino acid sequence of SEQ ID NO:1.